## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

## LISTING OF CLAIMS:

1. (currently amended): An apparatus for adjusting a filter tap length for an adaptive equalizer comprising:

a multipath detector for detecting multipath information from a difference between the correlation values of input data applied to the adaptive equalizer and a training sequence, and an auto correlation value of a training sequence when the training sequence is valid; and

a tap length adjusting unit for generating a tap length control signal based on positions of the pre-/post-ghosts farthest from a main tap by using the detected multipath information and a field sync signal,

wherein the tap length adjusting unit comprises:

a threshold comparator for comparing the detected multipath information with a threshold value and outputting only correlation values exceeding the threshold value;

a counter for counting field sync sections delayed by an amount of time taken in obtaining the correlation values;

a ghost detector for detecting a position of a ghost from the correlation values obtained by the threshold comparator for the delayed field sync sections counted by the counter; and

a tap length table for matching the tap length so as to cover the detected pre-/post-ghosts to output the tap length control signal.

2. (original): The apparatus according to claim 1, wherein the multipath detector comprises:

a first multiplexer for enabling the input data applied to the adaptive equalizer when the field sync signal is logic "high" and outputting enabled data;

a second multiplexer for enabling a reference signal when the field sync signal is logic "high" and outputting an enabled signal;

a first sync sequence correlator for calculating a correlation value of the data output from the first multiplexer and a 704-symbol training sequence;

a second sync sequence correlator for calculating a correlation value of the reference signal output from the second multiplexer and the 704-symbol training sequence; and

a subtractor for subtracting the output signal of the second sync sequence correlator from the output signal of the first sync sequence correlator to detect multipath information.

3. (currently amended): The apparatus according to claim 2, wherein the tap length adjusting unit further comprises:

a calculator for obtaining an absolute value of the output of the subtractor which is used as the multipath information obtained from the multipath detector[[;]] , and

wherein the [[a]] threshold comparator ~~for comparing~~ compares the obtained absolute value with [[a]] the threshold value and ~~outputting~~ outputs only the correlation values exceeding the threshold value;

~~a counter for counting field sync sections delayed by an amount of time taken in obtaining the correlation value;~~

~~a ghost detector for detecting a position of a ghost from the correlation value obtained by the threshold comparator for the delayed field sync sections counted by the counter; and~~

~~a tap length table for matching the tap length so as to cover the detected pre-/post-ghosts to output the tap length control signal~~.

4. (original): The apparatus according to claim 3, wherein the tap length table is classified into sections according to a distance from a main tap, and a predetermined number of taps is set to each section.

5. (previously presented): A method for adjusting the filter tap length for an adaptive equalizer comprising the steps of:

detecting multipath information from a difference between correlation values of input data applied to the adaptive equalizer and a reference signal, and from an auto correlation value of a training sequence; and

determining a required filter tap length by detecting positions of pre-/post-ghosts farthest from a main tap using the detected multipath information,

wherein the tap length determining step comprises:

comparing the detected multipath information with a threshold value and outputting only correlation values exceeding the threshold value;

counting field sync sections delayed by an amount of time taken in obtaining the correlation values;

detecting a position of a ghost from the correlation values obtained for the delayed field sync sections which are counted; and

adjusting the tap length so as to cover the detected positions of pre-/post ghosts.

6. (original): The method according to claim 5, wherein the multipath detecting step comprises the sub-steps of:

(a) inputting data;

(b) obtaining a correlation value between the data input in step (a) and a reference signal consisting of 704 known symbols;

(c) obtaining a difference between the correlation value obtained in step (b) and the auto correlation value of the reference signal; and

(d) detecting multipath information from the difference obtained in the step (c).

7. (canceled)

8. (previously presented): The method according to claim 5, wherein the input data applied to the adaptive equalizer is enabled for use in the multipath detecting when a field sync signal indicates a valid training sequence.

9. (previously presented): The method according to claim 5, wherein correlation operations for detecting multipath information are selectively enabled by a field sync signal.

10. (previously presented): The method according to claim 5, wherein the required filter tap length is determined by using a field sync signal.

11. (previously presented): The apparatus according to claim 1, wherein the input data applied to the adaptive equalizer is enabled for use in detecting multipath information when a field sync signal indicates a valid training sequence.

12. (previously presented): The apparatus according to claim 1, wherein correlation operations for detecting multipath information are selectively enabled by a field sync signal.